

Abstract of the Disclosure

This invention concerns a method and apparatus for manufacturing a sheet and a two-dimensional matrix of plastic optical fibers. The fibers may be of the step-index or graded-index type. Co-extrusion through a specially designed die is used to produce a sheet composed of a fiber array. The fiber sheet (ribbon) can be used for transmitting optical signals. These arrays may also be stacked and fused at high temperatures to form the two-dimensional matrix required for many applications such as large area image transfer. In addition, a high-speed, continuous manufacturing method is disclosed to produce a massive two-dimensional matrix of fibers. The method of manufacture permits high quality image transfer at low manufacturing cost in a wide array of geometries.